Smoking has a dramatic impact on reproductive health. It can affect both men & women’s fertility, health of the pregnant woman, the health of the unborn child and the health of young children.\(^1\)

Hillingdon’s smoking at time of delivery rates remain high compared the neighbouring Boroughs but is slightly lower than the national average. Smoking during pregnancy tends to be higher among the routine & manual socio economic groups and is a substantial contributing factor to inequalities in child birth mortality and morbidity.

Hillingdon Stop Smoking Service and the Maternity Services at Hillingdon Hospital Trust employ a 0.4 FTE Midwife Specialist to work with pregnant smokers. The number of successful pregnant quitters is substantial compared to the North West Sector but the National Tobacco Control Strategy requires a 50% drop in the number of pregnant smokers by 2020.

Women who use the combined oral contraceptive and who smoke are vulnerable to an increased risk of heart disease- by up to 20 times higher. Ideally all women who smoke and use the combined oral contraceptive should be advised not to smoke.\(^2\)

Even low levels of smoking can have an impact on the likelihood of conceiving, by as much as 10 to 40% less per cycle.\(^3\)

Babies born to women that smoke are on average 200 grams (8 oz) lighter than those born to non smoking mothers. Low birth weight is associated with higher rates of death and disease in infancy and early childhood. If women can stop smoking in the first trimester then the risk of low birth weight drops to that of a non smoker.\(^4\)

The rate of spontaneous abortion, or miscarriage, is significantly higher in women who smoke.\(^5\)

Smokers tend to experience higher rates of complications during pregnancy and labour. These can include being 1.5 to 2.5 times at risk of ectopic pregnancy.\(^6\)

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2. WHO Collaborative Study of Cardiovascular Disease and Steroid Hormone Contraception 1996 Ischaemic stroke and combined oral contraceptives: results of an international, multicentre, case-control study. Lancet 348: 498 - 505
5. Smoking and Reproductive Health. BMA, 2004
Additional issues include bleeding during pregnancy, premature detachment of placenta and premature rupturing of the membranes.\(^7\)

The risk of still birth or death of an infant within the first 4 weeks of life is increased by about one third in babies of smokers. This rate tends to be higher among the manual routine and manual socio economic groups and those that are at higher risk of perinatal deaths.

Pre term births create a substantial clinical risk and accounts for half of all neonatal deaths. Smokers risks of a pre term birth are 2 to 2.5 times higher than non smokers.\(^8\) More than a quarter of the risk of Sudden Infant Death Syndrome (or cot death) can be attributed to maternal smoking.\(^9\)

The longer terms risks for a child growing up in a smoking household include being twice as likely to suffer from a serious respiratory infection than the child of a non smoker, increase in asthma\(^10\), infantile colic and cleft palate\(^11,12\)

Hillingdon has approximately 4,100 births a year. Nationally 32% of mother in England reported smoking in the 12 months before or during pregnancy and 17% of these remained smoking during the pregnancy.\(^13\) Hillingdon’s rates of smoking at time of delivery indicate are 10%, which is just lower than the National average of 13% but significantly greater then the neighbouring Boroughs of Ealing and Harrow (approximately 5%) and slightly higher than Hounslow (approximately 9%).

The 10 year National Tobacco Strategy aims to reduce smoking at time of delivery by at least half by 2020. For Hillingdon there needs to be a reduction from 10% to 5%./

Analysis

The number of pregnant smokers at time of delivery remains a substantial issue, despite a high number of reported successes. A reduction in the prevalence rates by half in 2020 will have a dramatic impact on the health inequalities within this area and a substantial reduction on the burden of untoward incidents within the Maternity Services.

However, there are issues around data capture and collection. Improvements have been made in identifying pregnant smokers at time of booking using universal carbon monoxide screening. This is essential as quitting in the first trimester is key to

\(^7\) Poswillo, D and Alberman, E. Effects of smoking on the fetus, neonate, and child. OUP 1992
\(^9\) Royal College of Physicians. Smoking and the Young. RCP, London, 1992
reducing the negative health impacts of smoking. This process has begun in early 2010 but it will take time for the process to be fully embraced and rigourously applied. An area that does need further investigation is accurate recording and reporting of smoking at time of delivery.

**Conclusion**

A reduction in the number of smokers at time of delivery would have a substantial impact on health inequalities, reduce burden of demand on Maternity Services and is a cost effective intervention.

The Borough can start to achieve a reduction of 50% by 2020.

- Increase .4 FTE to 1 FTE equivalent
- Develop a robust pregnancy and smoking action and delivery plan.
- Initiate an annual health promotion campaign.
- Ensure information and resources are automatically circulated to all pregnant smokers.
- Continue with universal Carbon Monoxide testing at booking.
- Develop universal testing at recording at point of delivery.
- Encourage Smokefree Homes campaign for new families.

Improvements in data collection and data capture will help provide an accurate picture of need and how Hillingdon is addressing it.